Officers in Charge of an Engineering Watch in a Manned Engine-room or Designated Duty Engineers in a Periodically Unmanned Engine-room

STCW Competence	Knowledge, understanding and proficiency	Performance Condition(s)	Performance Behavior	Performance Criteria
Maintain Marine Engineering Systems, Including Control System	Marine Systems Appropriate basic mechanical knowledge and skills.	In workshop, given access to a lathe, mild steel rod stock and other necessary equipment and supplies,	The candidate will develop a plan and use the lathe to produce a project* in accordance with attached	(1) Plan reflects proper sequence of actions and is complete;
			drawing (drawing #1), describing actions as they are being performed. * Project requires proficiency	(2) Proper stock is selected and lathe operations are properly performed;
			in lathe principles, faceplates or chucks and centers, material removal, thread cutting, and taper turning.	(3) Project is completed according to plan, within tolerances specified in the drawing;
				(4) Actions taken are correctly and completely described;
				(5) No safety violations are observed.
	Undertake maintenance and repair to plant and equipment	Aboard ship or in workshop, given a centrifugal pump and other equipment, manuals and specifications needed to complete the task,	The candidate will develop a plan, dismantle pump and perform the following maintenance describing actions as they are being performed: 2. Examine and measure all	(1) Plan reflects proper sequence of actions, is complete, and conforms to the requirements of manufacturer's instructions and ship's procedures;
			parts for wear and deterioration;	(2) Dismantling, examination and measurement,

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	? Re-fit and check all	assessment of wear or
	clearances;	deterioration, re-fitting and
	? Replace and adjust seals.	clearance checks, and
		replacement/adjustment of
	NOTE: It is readily	seals is successful and
	recognized that the	conducted according to plan;
	candidate for OICEW fully	conducted according to plan,
	comprehend the operation	(3) Actions taken are correctly
	of a centrifugal pump.	and completely described;
		and completely described,
	The above task should be	(4) Deguined stone telepron
	done as part of their	(4) Required steps taken are
	training.	verified by assessor utilizing
	HOWEVER , this specific	sample checklist as a guide;
	task is related to Table A-	
	III/2 and not that of A-III/1,	(5) No safety violations are
	AND, should not be	observed.
	considered as an assessed	
	proficiency	
Aboard ship or in workshop,	The candidate will develop a	(1) Plan reflects proper
given a reciprocating pump	plan, dismantle pump and	sequence of actions, is
and other equipment, manuals	perform the following	complete, and conforms to
and specifications needed to	maintenance on a	the requirements of
complete the task,	reciprocating pump,	manufacturer's instructions
complete the task,	describing actions as they are	and ship's procedures;
	being performed:	and simp s procedures,
	? Examine and measure all	(2) Dismontling exemination
		(2) Dismantling, examination
	parts for wear and	and measurement,
	deterioration;	assessment of wear or

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	? Machine and grind valves	deterioration, re-fitting and
	and seats;	clearance checks, and
	? Re fit and check all	machining and grinding
	clearances;	valves and seats, re-fitting,
	? Remove and re-fit gland	and replacement of gland
	packing.	packing is successful and
	pacining.	conducted according to plan;
	NOTE: It is readily	conducted according to plan,
	recognized that the	(3) Actions taken are correctly
		•
	candidate for OICEW fully	and completely described;
	comprehend the operation	(4) D ' 1 (1 1
	of a reciprocating pump.	(4) Required steps taken are
	The above task should be	verified by assessor utilizing
	done as part of their	sample checklist as a guide;
	training.	
	HOWEVER , this specific	(5) No safety violations are
	task is related to Table A-	observed.
	III/2 and not that of A-III/1,	
	AND, should not be	
	considered as an assessed	
	proficiency	
	<u></u>	
Aboard ship or in workshop,	When asked, the candidate	(1) Plan reflects proper
given a gear pump and other	will develop a plan, dismantle	sequence of actions, is
equipment, manuals and	pump and perform the	complete, and conforms to
specifications needed to	following maintenance on a	the requirements of
complete the task,	gear pump, describing actions	manufacturer's instructions
complete the task,		
	as they are being performed: ? Examine and measure all	and ship's procedures;
	,	(2) Diamontling avaningting
	parts for wear and	(2) Dismantling, examination

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	deterioration;	and measurement,
	? Re fit and check all	assessment of wear or
	clearances;	deterioration, re-fitting and
	 Replace and adjust seals. 	clearance checks, and
	NOTE: It is readily	replacement/adjustment of
	recognized that the	seals is successful conducted
	candidate for OICEW fully	according to plan;
	comprehend the operation	
	of a rotary pump.	(3) Actions taken are correctly
	The above task should be	and completely described;
	done as part of their	
	training.	(4) Required steps taken are
	HOWEVER , this specific	verified by assessor utilizing
	task is related to Table A-	sample checklist as a guide;
	III/2 and not that of A-III/1,	
	AND, should not be	(5) No safety violations are
	considered as an assessed	observed.
	<u>proficiency</u>	
Aboard ship or in workshop,	The candidate will plan for	(1) Plan reflects proper
given a piping diagram and	and inspect a valve manifold,	sequence of actions, is
other equipment needed to	describing actions as they are	complete, and conforms with
complete the task,	being performed.	ship's procedures;
		(2) Correctly: identifies contents
		of pipe; isolates pipe section;
		relieves pressure and drains
		pipe section; dismantles
		flanges and screwed

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		connections; cleans and
		inspects interior of pipe;
		cleans and prepares joints
		for re-assembly; selects and
		applies jointing material; re-
		assembles; hydraulically
		tests; eliminates any leakage;
		checks pipe supports; checks
		lagging and checks shrouding, if used;
		shrouding, ir used,
		(3) Actions taken are correctly
		and completely described;
		and completely accommoda,
		(4) Required steps taken are
		verified by assessor utilizing
		sample checklist as a guide;
		(5) No safety violations are
		observed.
Aboard ship or in workshop,	The candidate will plan for	(1) Plan reflects proper
given one of the following	and perform a maintenance	sequence of actions, is
types of valves: safety valve,	overhaul on a valve,	complete, and conforms with
steam trap, quick closing	describing actions as they are	ship's procedures;
valve, drain valve or relief	being performed.	(2) Compathy avaninas sasts
valve, and other equipment	Of the nearly half dozen valve BASIC types, which	(2) Correctly: examines seats,
needed to complete the task,	valve BASIC types, which valve type is this to be done?	valves and glands; machines valves and seats; beds in
	As part of the training process	valves on seats using
	this task is necessary, BUT ,	grinding paste; removes old
	uns task is necessary, DUT,	grinding paste, removes old

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	should not be considered as an assessed proficiency,	gland packing; selects replacement gland packing;
		re-packs glands; and tests, correcting any leaking;
		(3) Actions taken are correctly and completely described;
		(4) Required steps taken are verified by assessor utilizing sample checklist as a guide;
		(5) No safety or violations are observed.
Aboard ship or in workshop, given a heat exchanger and other equipment needed to complete the task,	The candidate will plan for and perform an overhaul of the heat exchanger, describing actions as they are being performed.	(1) Plan reflects proper sequence of actions, is complete, and conforms with manufacturer's instructions and ship's procedures;
	Of the many types/uses of heat exchangers, for which heat exchanger does this apply? As part of the training process this task is necessary, BUT, should not be considered as an assessed proficiency	(2) Correctly: dismantles and examines for leakage, corrosion, erosion and fouling; checks provision for tube expansion, de-scaling, replacing and plugging tubes, and checking tube
		tightness and means for reducing corrosion; and, fill and tests heat exchanger,

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			noting and correcting any problems;
			(3) Actions taken are correctly and completely described;
			(4) Required steps taken are verified by assessor utilizing sample checklist as a guide;
			(5) No safety violations are observed.
	Aboard ship or in workshop, given access to scavenging air receiver and other equipment needed to complete the task,	The candidate will drain scavenging air receivers of oil accumulation, describing actions as they are being performed.	(1) Opens drains, collects oil accumulation, observes oil outflow, closes drain and disposes oil;
		Does not apply to large low speed engines	(2) Actions taken are correctly and completely described;
		<u>specu engines</u>	(3) Required steps taken are verified by assessor utilizing sample checklist as a guide;
			(4) No safety or environmental violations are observed.
	Aboard ship or in workshop, given access to a clutch air system and other equipment	The candidate will perform routine maintenance on start and clutch air system,	(1) Drains moisture separators and start air and clutch tanks; detects abnormal
	needed to complete the task,	describing actions as they are	conditions, blows down

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being performed.	compressed air strainers;
This is part of the start-up and/or watch standing procedures. To have singled	(2) Actions taken are correctly and completely described;
this out is counterproductive and misleading as there are additional tasks that need to be identified for an effect	(3) Required steps taken are verified by assessor utilizing sample checklist as a guide;
proficiency assessment to be conducted.	(4) No safety or environmental violations are observed.